

# FIG.1 PRIOR ART

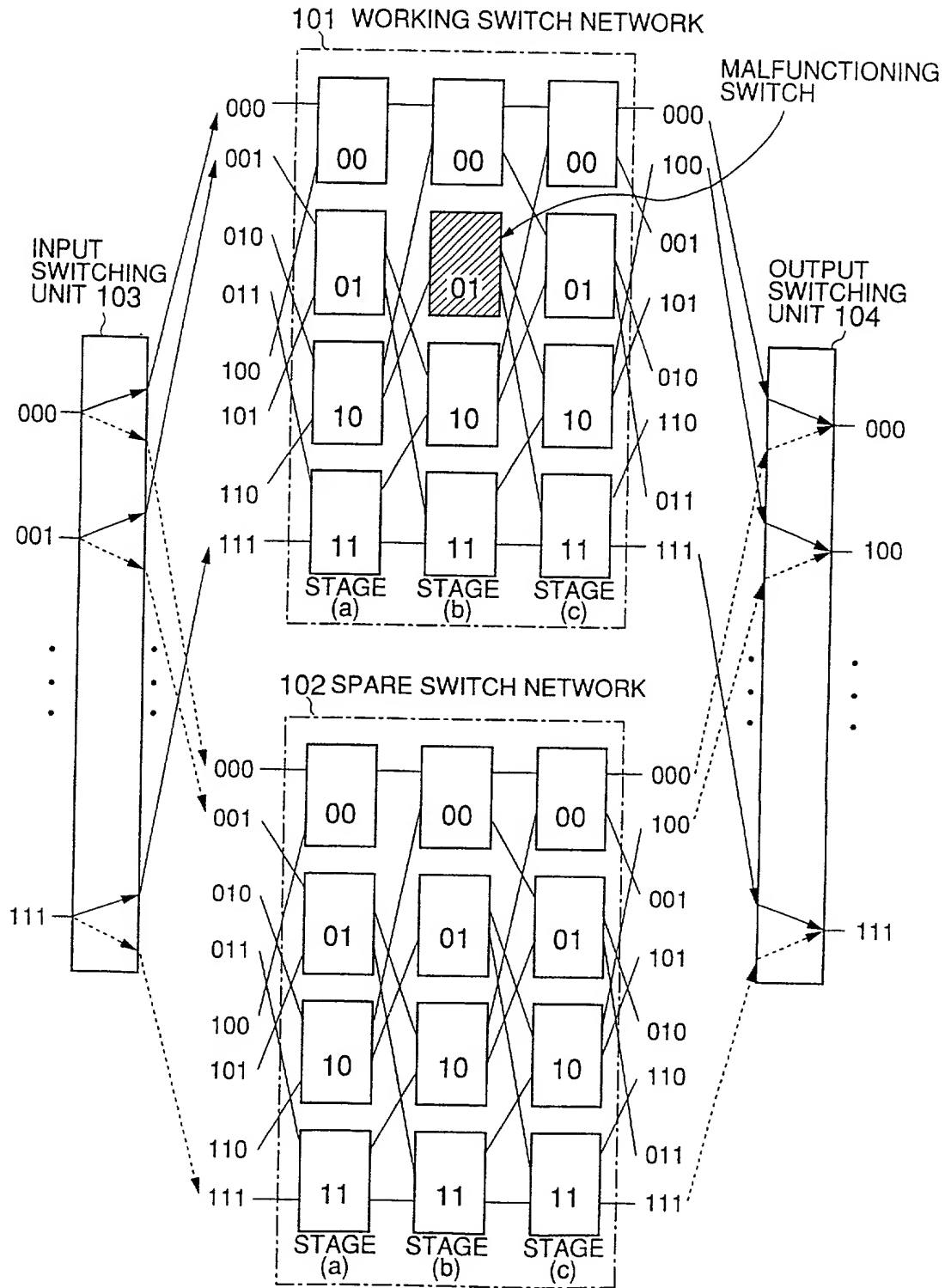


FIG.2

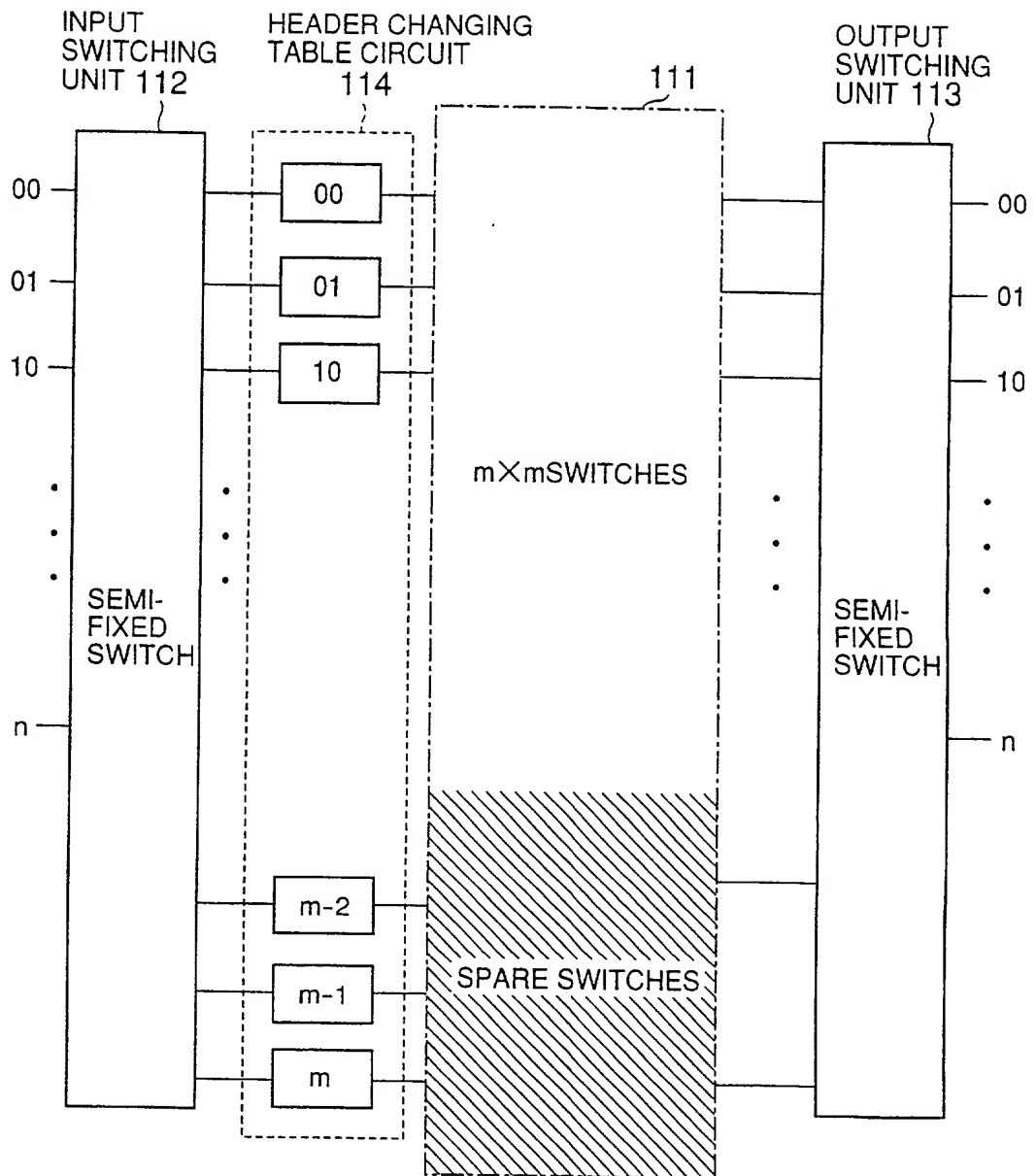
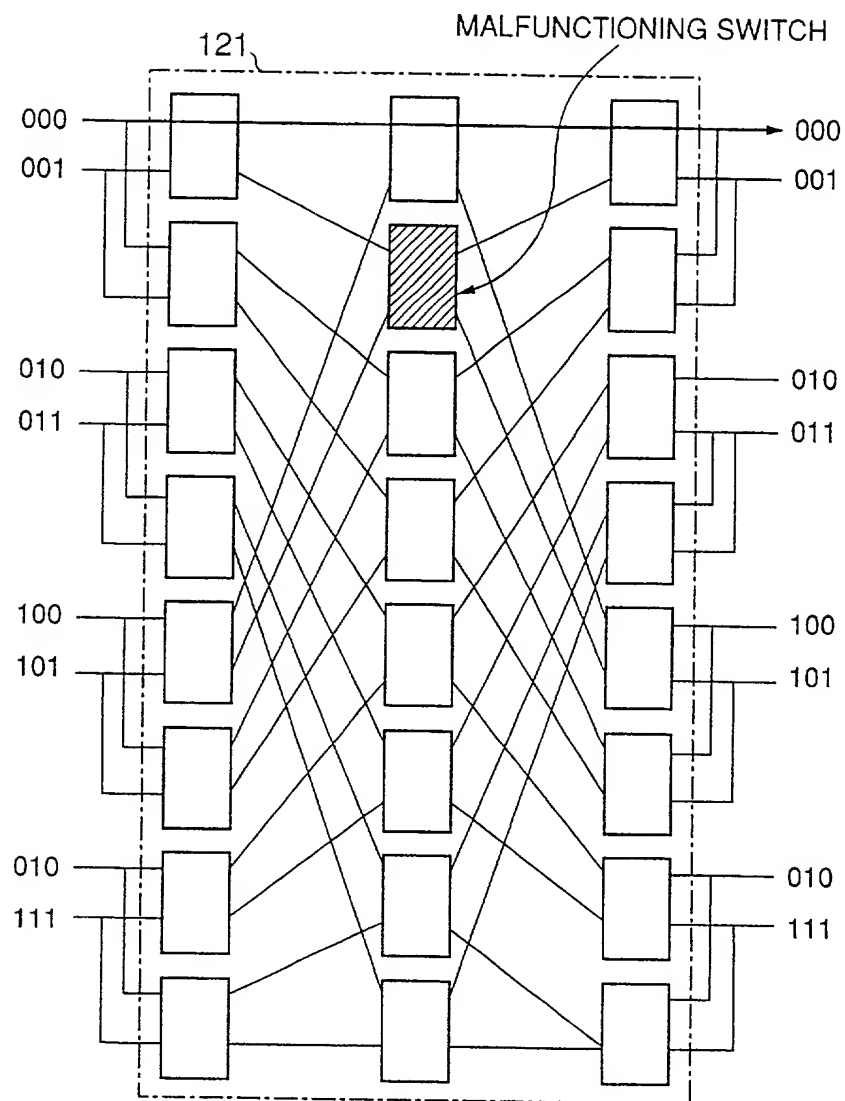


FIG.3



# FIG.4

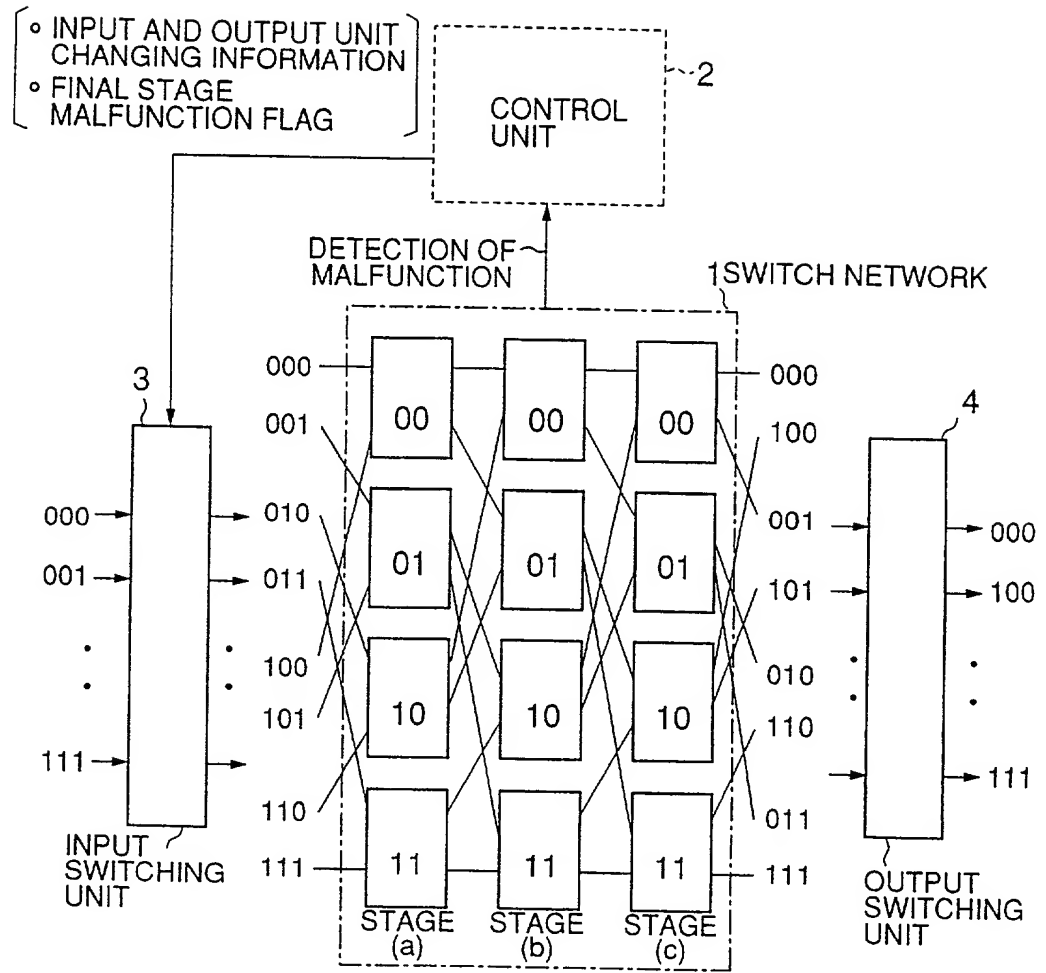


FIG.5

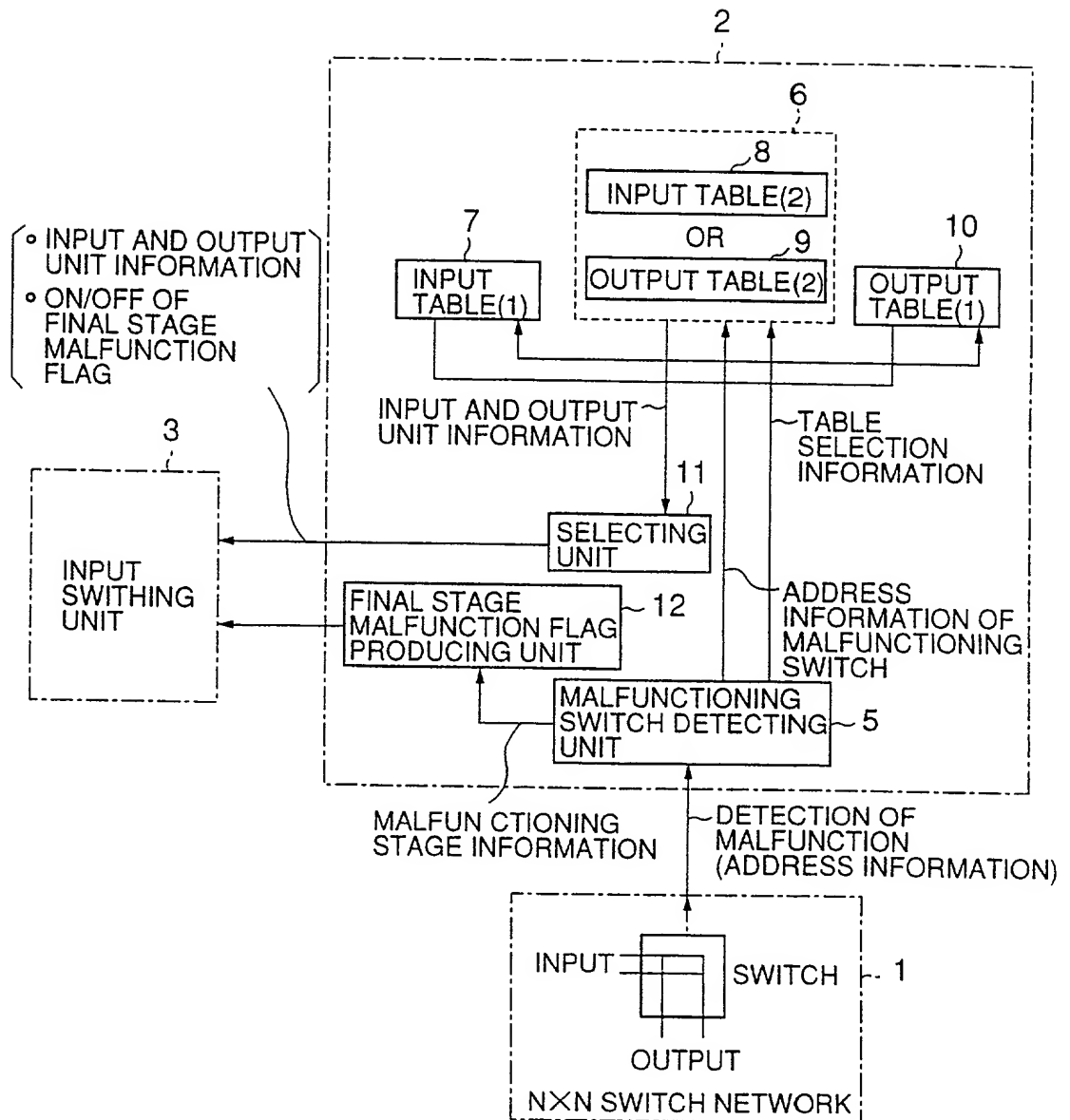


FIG.6A

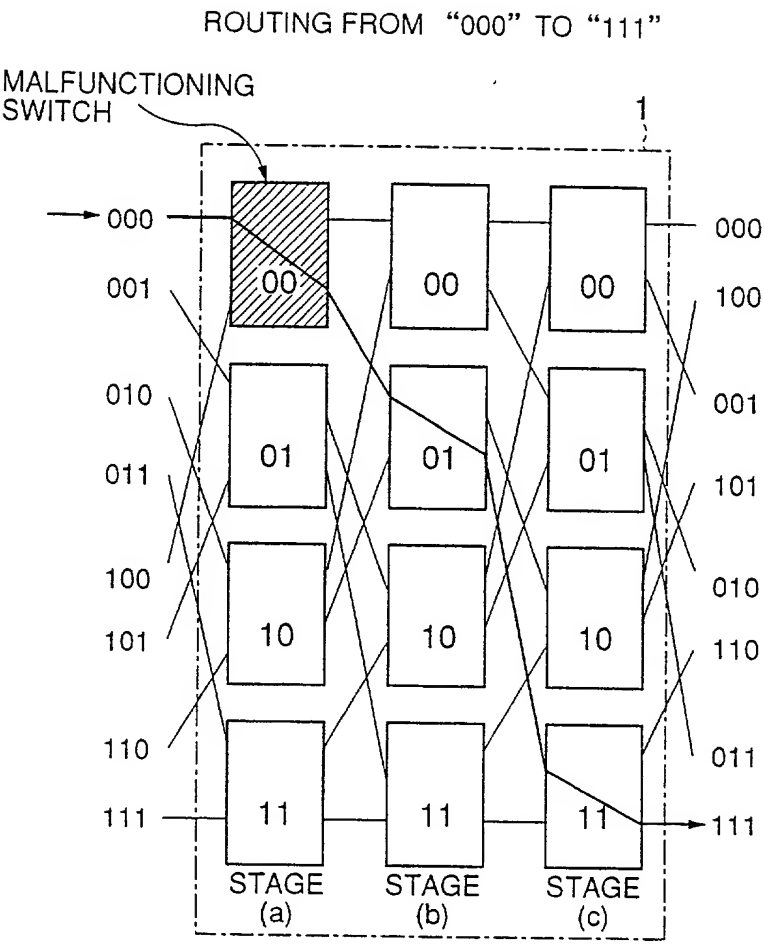


FIG.6B

\*: DONT CARE BIT  
 ■: SELECTED SWITCH

INPUT TABLE(1)

PUT ADDRESS	MALFUNCTIONING SWITCH ADDRESS	INPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	INPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	INPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	INPUT ADDRESS AFTER CHANGE
* 00	OTHER THAN * 00	NO CHANGE	01	NO CHANGE	10	NO CHANGE	11	NO CHANGE
* 01	NO CHANGE	OTHER THAN * 01		OTHER THAN * 01		NO CHANGE		NO CHANGE
* 10	NO CHANGE	NO CHANGE		NO CHANGE		OTHER THAN * 10		NO CHANGE
* 11	NO CHANGE	NO CHANGE		NO CHANGE		NO CHANGE		OTHER THAN * 11

FIG.6C

2X2 SWITCH ADDRESS

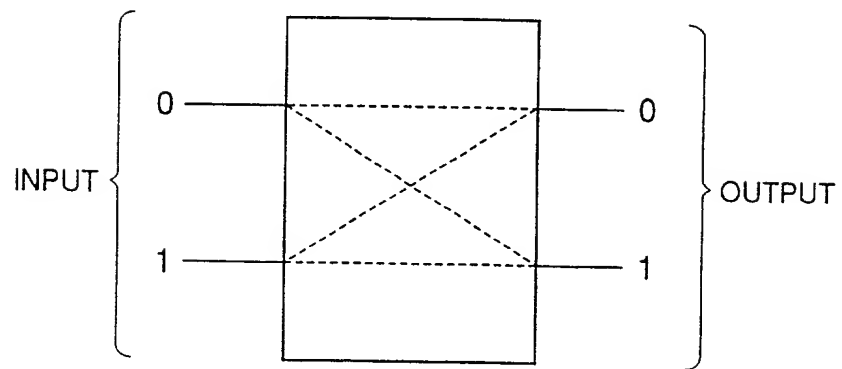




FIG.7A

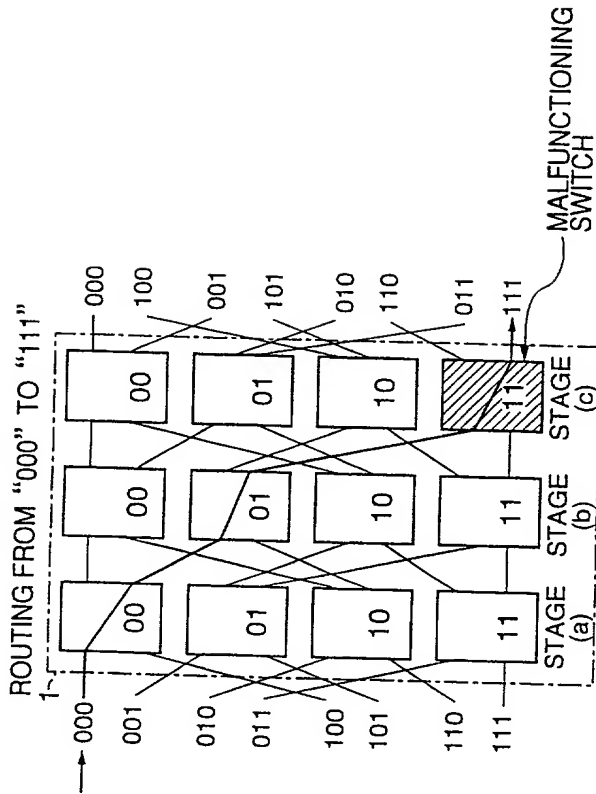


FIG.7B

OUTPUT TABLE(1)

\* : DONT CARE BIT  
 ▨ : SELECTED SWITCH

INPUT ADDRESS	MALFUNCTIONING SWITCH ADDRESS	OUTPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	OUTPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	OUTPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	OUTPUT ADDRESS AFTER CHANGE
* 00	00	OTHER THAN * 00	01	NO CHANGE	10	NO CHANGE	11	NO CHANGE
* 01		NO CHANGE		OTHER THAN * 01		NO CHANGE		NO CHANGE
* 10		NO CHANGE		NO CHANGE		OTHER THAN * 10		NO CHANGE
* 11	00	NO CHANGE	01	NO CHANGE	10	NO CHANGE	11	OTHER THAN * 11

FIG.8A

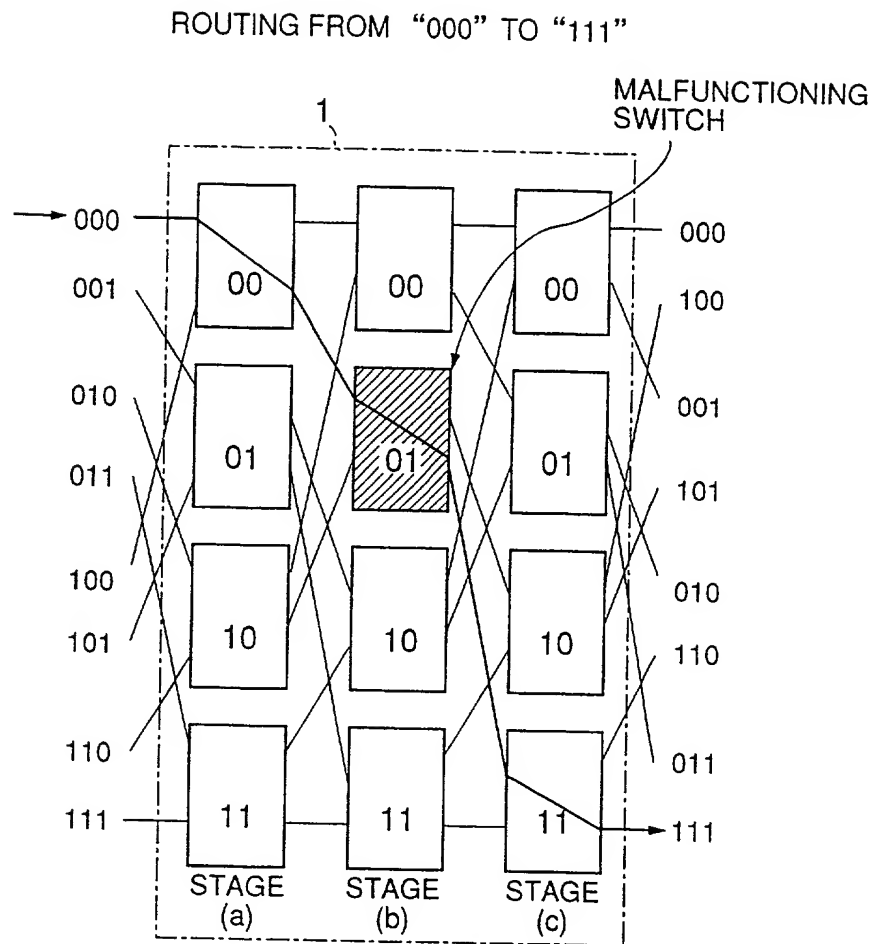


FIG.8B

\*: DONT CARE BIT

☐: SELECTED SWITCH

INPUT TABLE(2)

INPUT ADDRESS	MALFUNCTIONING SWITCH ADDRESS	INPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	INPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	INPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	INPUT ADDRESS AFTER CHANGE
000	00	NO CHANGE	01	OTHER THAN **0	10	NO CHANGE	11	NO CHANGE
001		NO CHANGE		NO CHANGE		NO CHANGE		OTHER THAN **1
010		NO CHANGE		OTHER THAN **0		NO CHANGE		NO CHANGE
011		NO CHANGE		NO CHANGE		NO CHANGE		OTHER THAN **1
100		NO CHANGE		OTHER THAN **0		NO CHANGE		NO CHANGE
101		NO CHANGE		NO CHANGE		NO CHANGE		OTHER THAN **1
110		NO CHANGE		OTHER THAN **0		NO CHANGE		NO CHANGE
111		NO CHANGE		NO CHANGE		NO CHANGE		OTHER THAN **1

## MALFUNCTIONING SWITCH

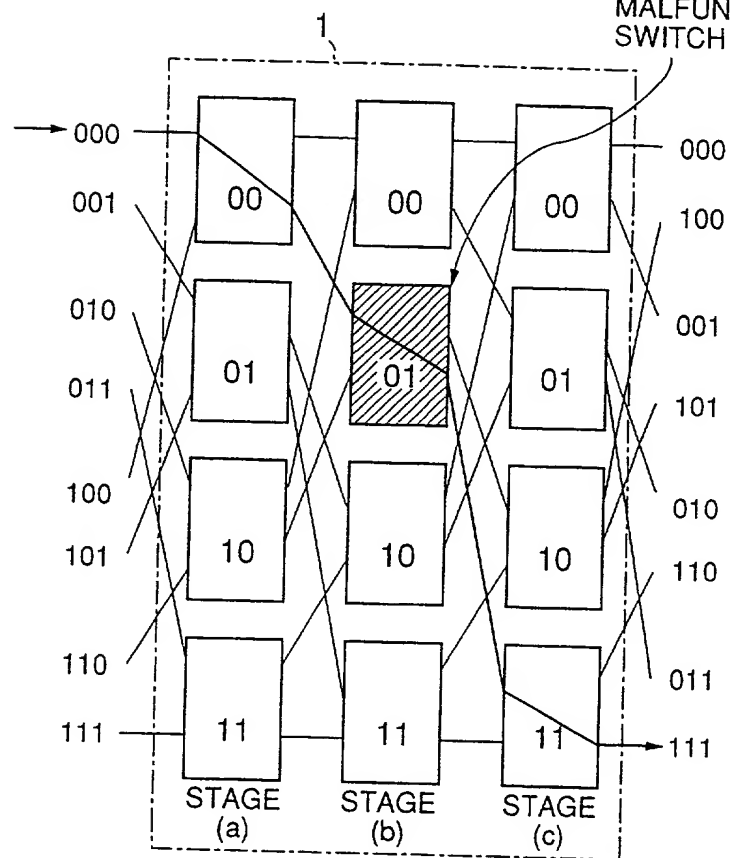


FIG.9B

\*: DONT CARE BIT  
 □: SELECTED SWITCH

OUTPUT TABLE(2 )

UTPUT DRESS	MALFUNCTIONING SWITCH ADDRESS	OUTPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	OUTPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	OUTPUT ADDRESS AFTER CHANGE	MALFUNCTIONING SWITCH ADDRESS	OUTPUT ADDRESS AFTER CHANGE
000	00	OTHER THAN 0* *	01	NO CHANGE	10	NO CHANGE	11	NO CHANGE
001		OTHER THAN 0* *		NO CHANGE		NO CHANGE		NO CHANGE
010		OTHER THAN 0* *		NO CHANGE		NO CHANGE		NO CHANGE
011		OTHER THAN 0* *		NO CHANGE		NO CHANGE		NO CHANGE
100		NO CHANGE		OTHER THAN 1* *		NO CHANGE		NO CHANGE
101	00	NO CHANGE	01	OTHER THAN 1* *	10	NO CHANGE	11	NO CHANGE
110		NO CHANGE		OTHER THAN 1* *		NO CHANGE		NO CHANGE
111		NO CHANGE		OTHER THAN 1* *		NO CHANGE		NO CHANGE

FIG.10

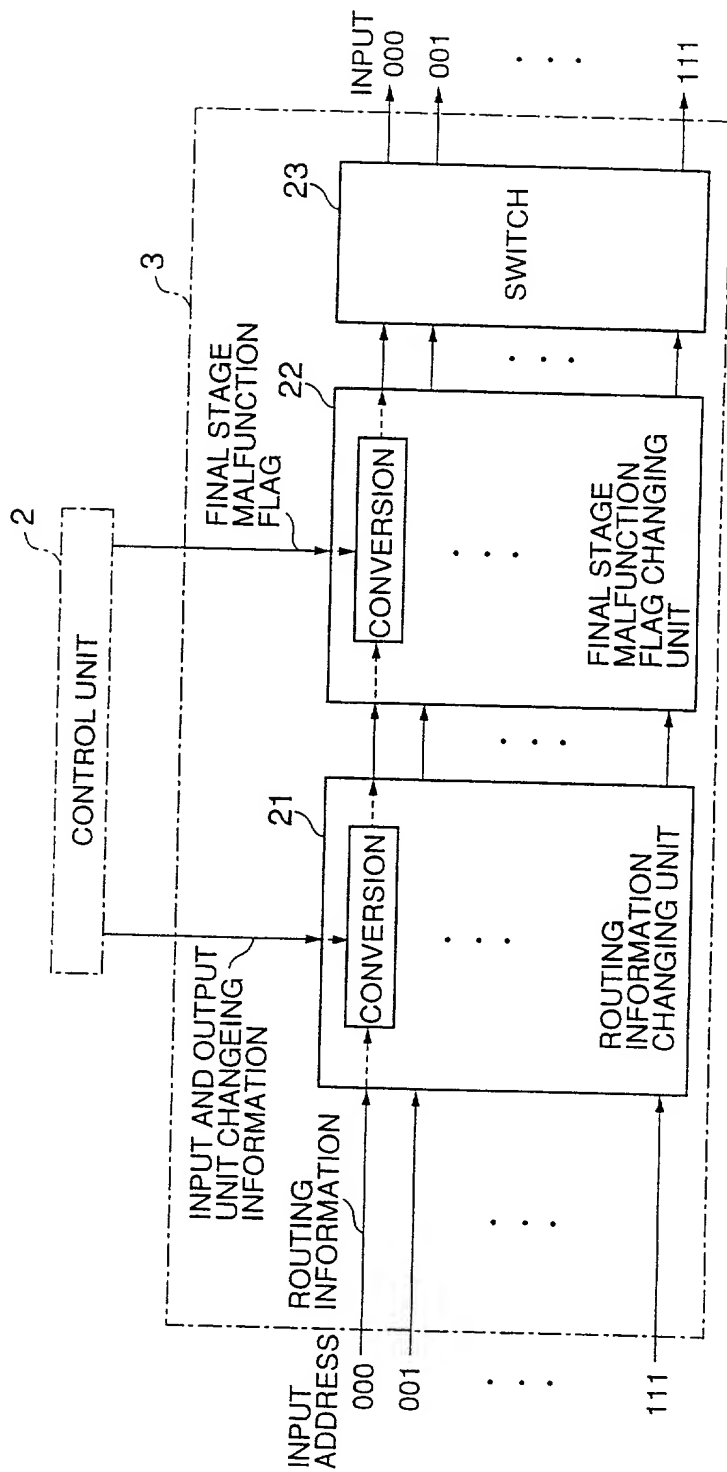


FIG.11

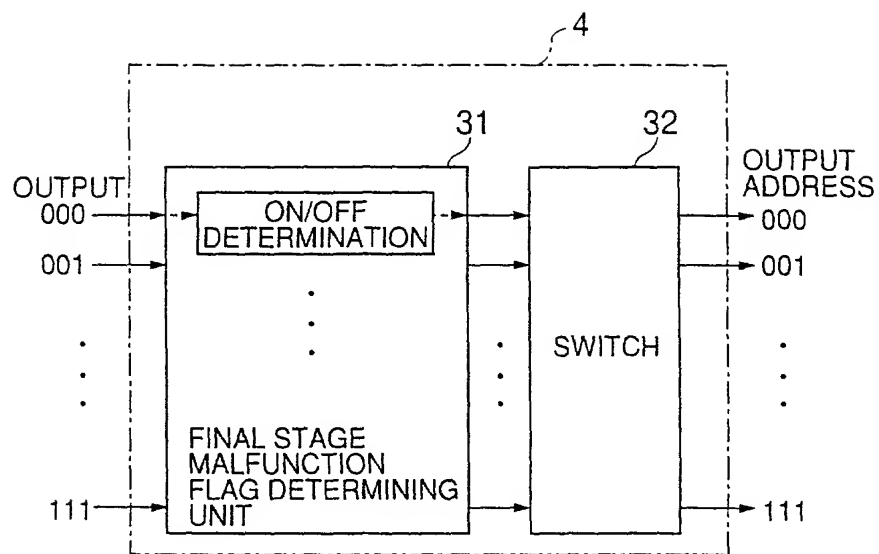


FIG. 12A

FRAM FORMAT IN INPUT SWITCHING UNIT

\* : DONT CAR BIT  
 [Hatched Box] : SELECTED  
 ROUTING  
 INFORMATION

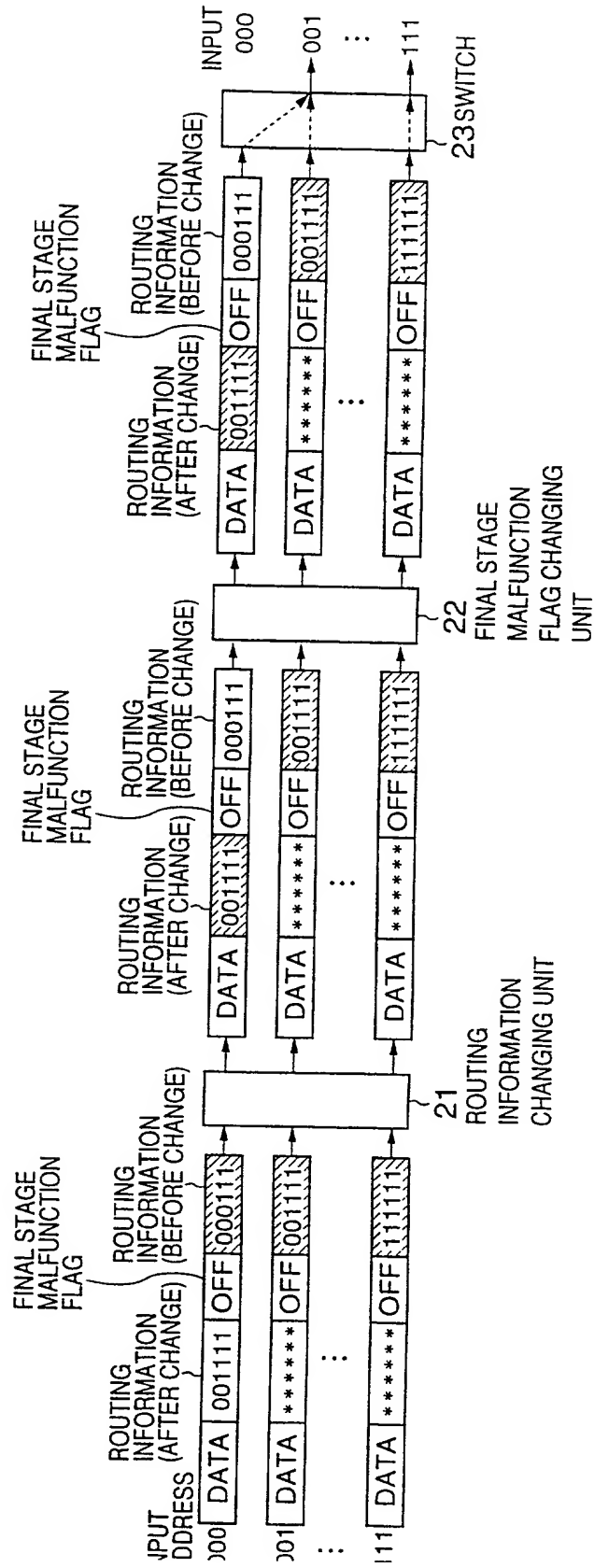




FIG. 12B

FRAME FORMAT IN OUTPUT SWITCHING UNIT

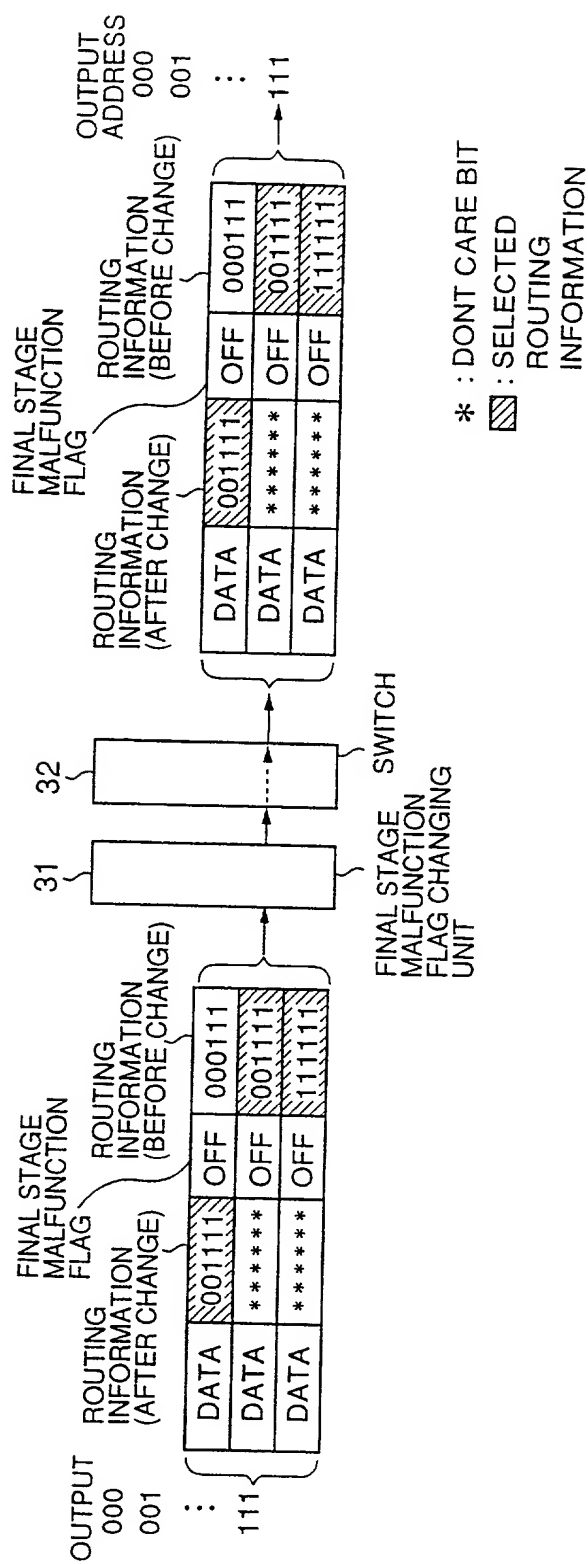


FIG.13A

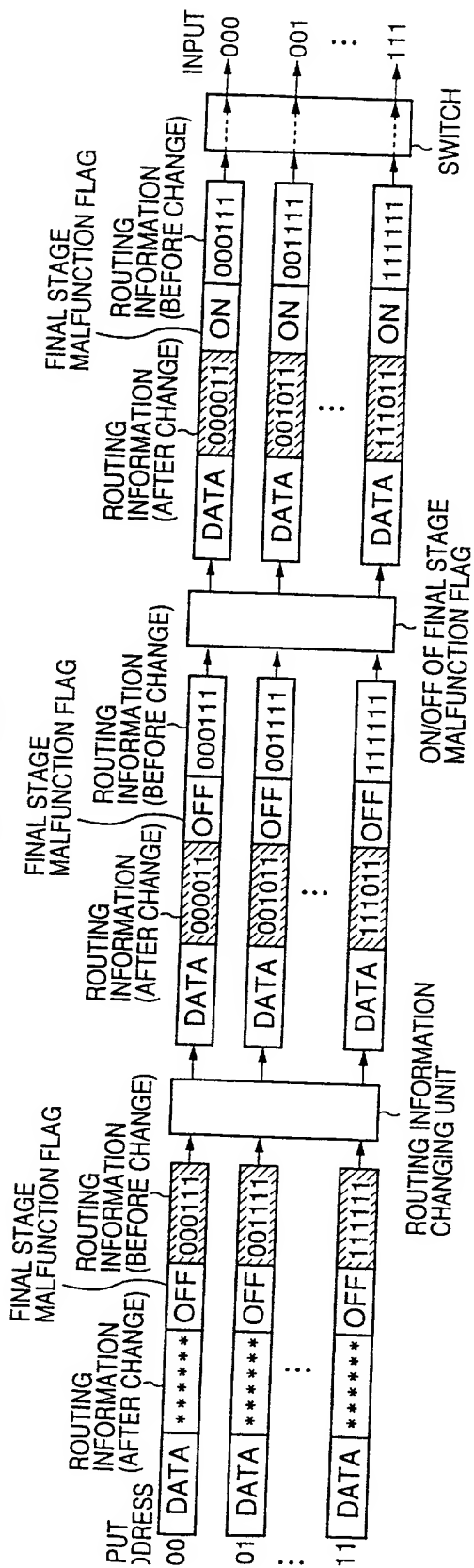


FIG.13B

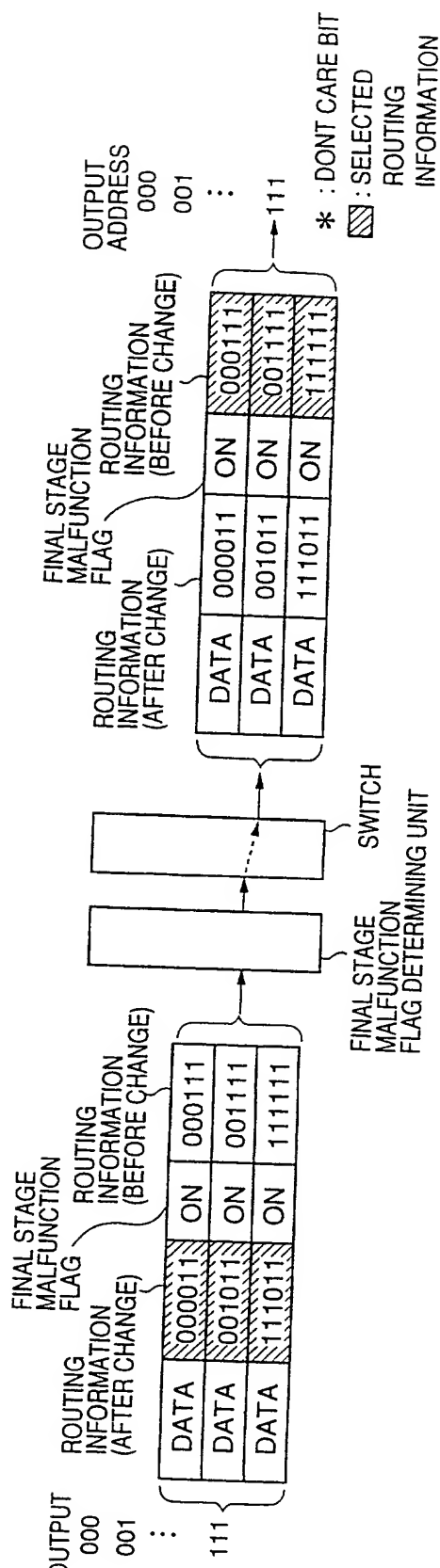
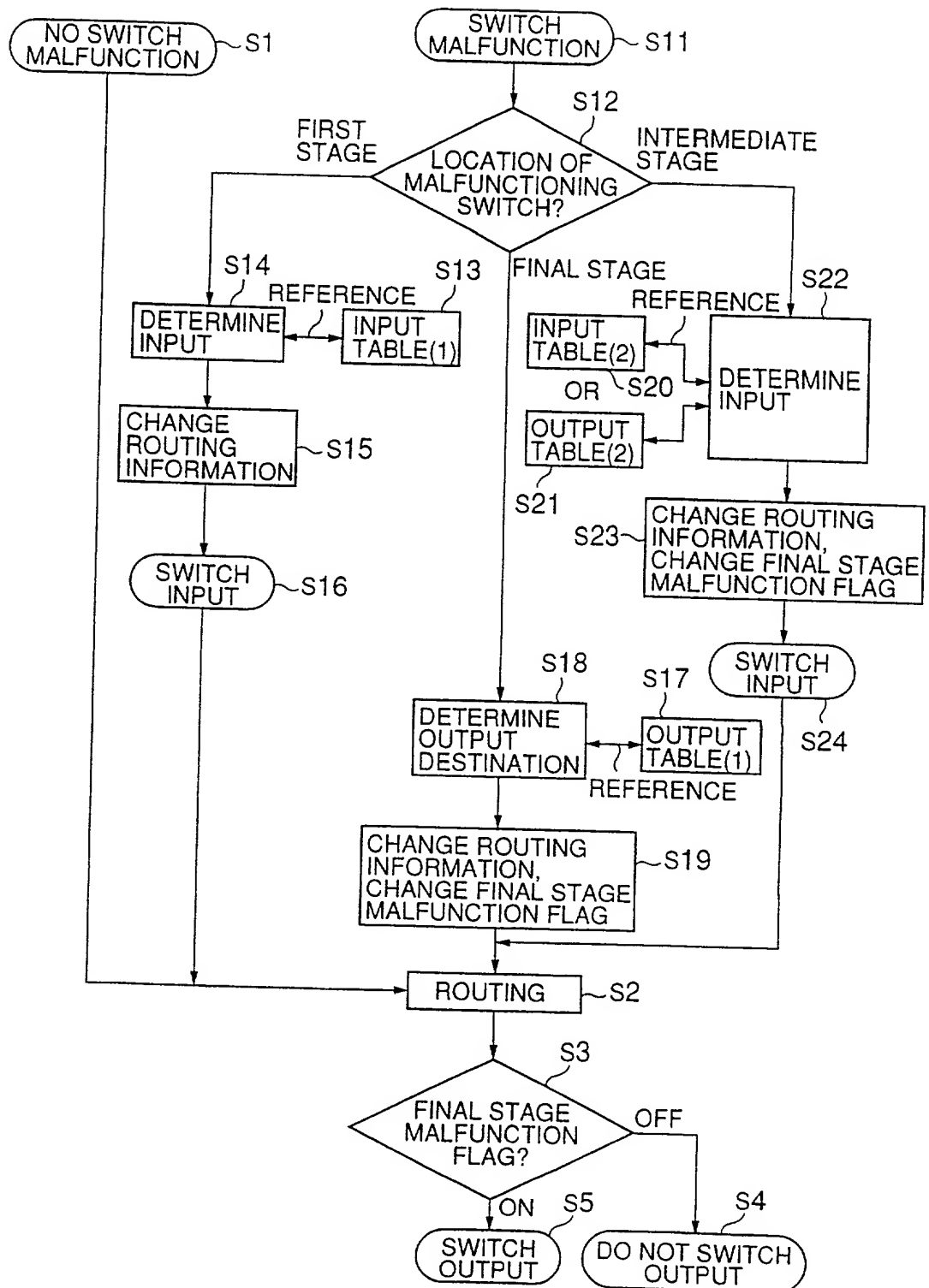
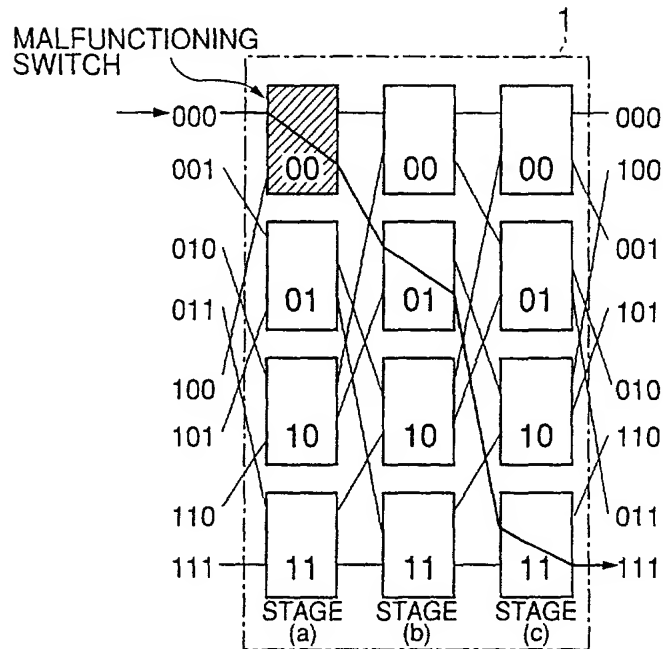


FIG.14



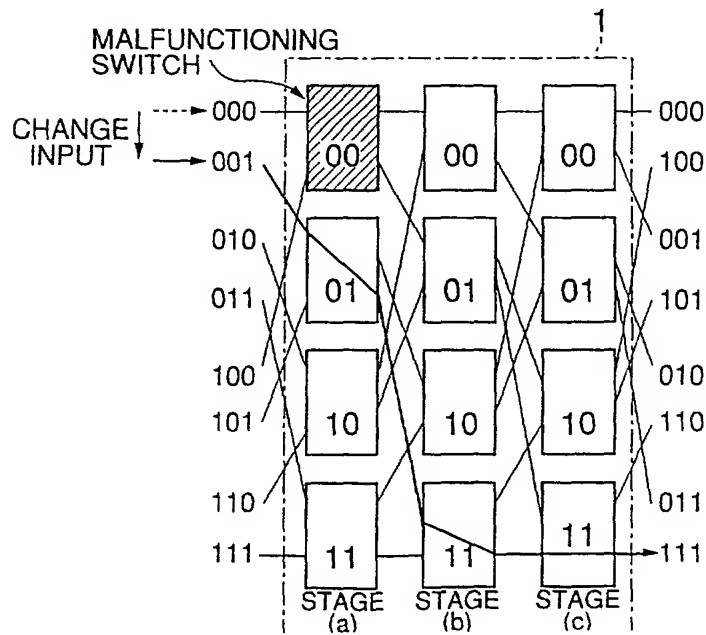
# FIG.15A

ROUTING FROM "000" TO "111" (BEFOR CHANGE)



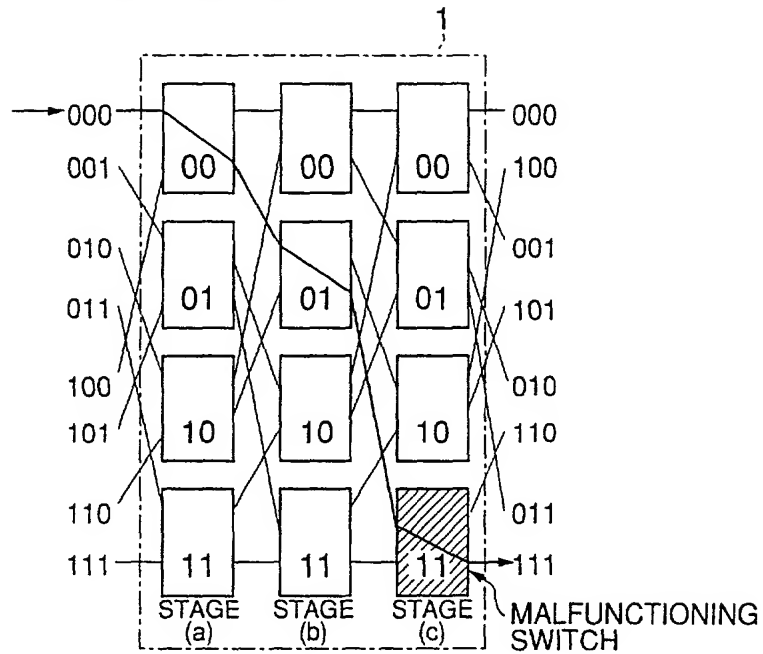
# FIG.15B

ROUTING FROM "000" TO "111" (AFTER CHANGE)



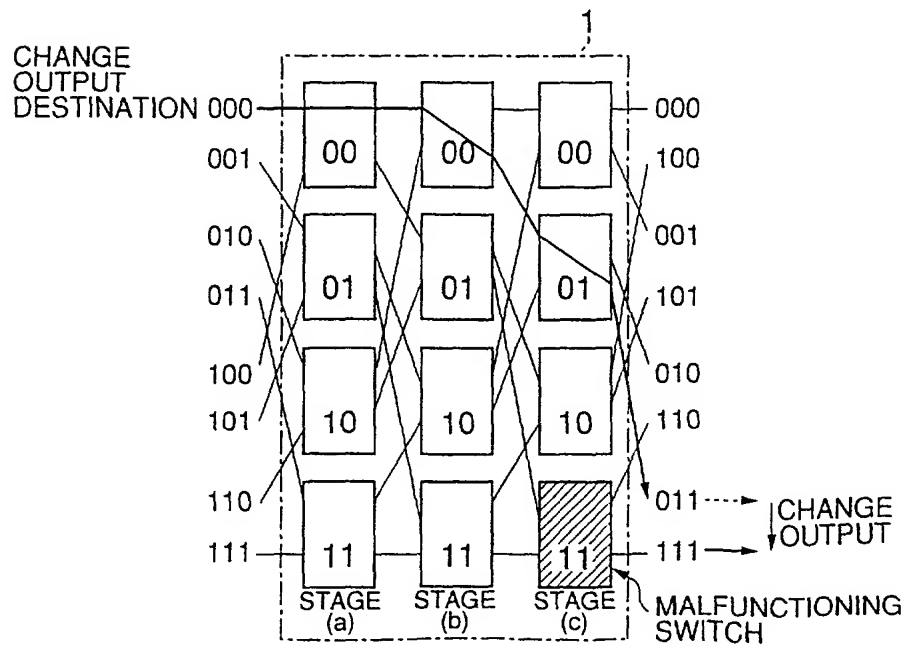
# FIG.16A

ROUTING FROM "000" TO "111" (BEFOR CHANGE)



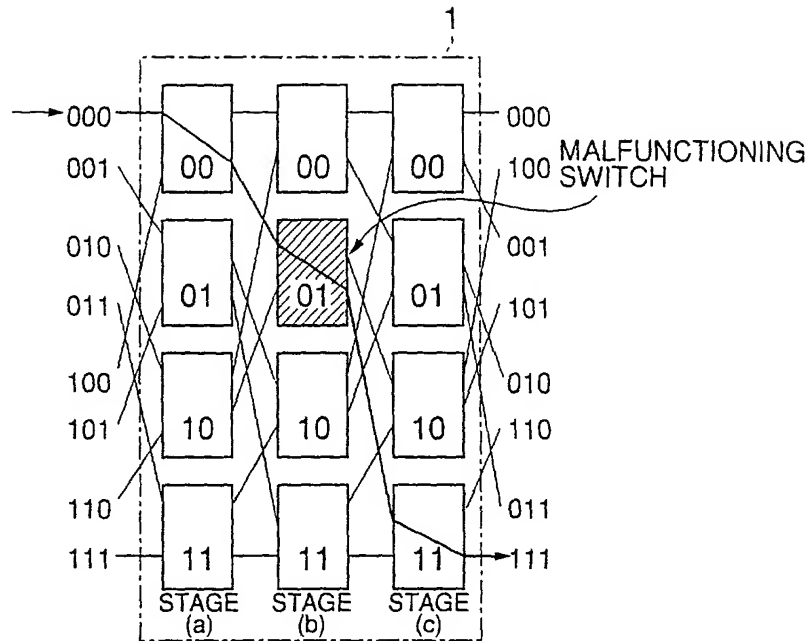
# FIG.16B

ROUTING FROM "000" TO "111" (AFTER CHANGE)



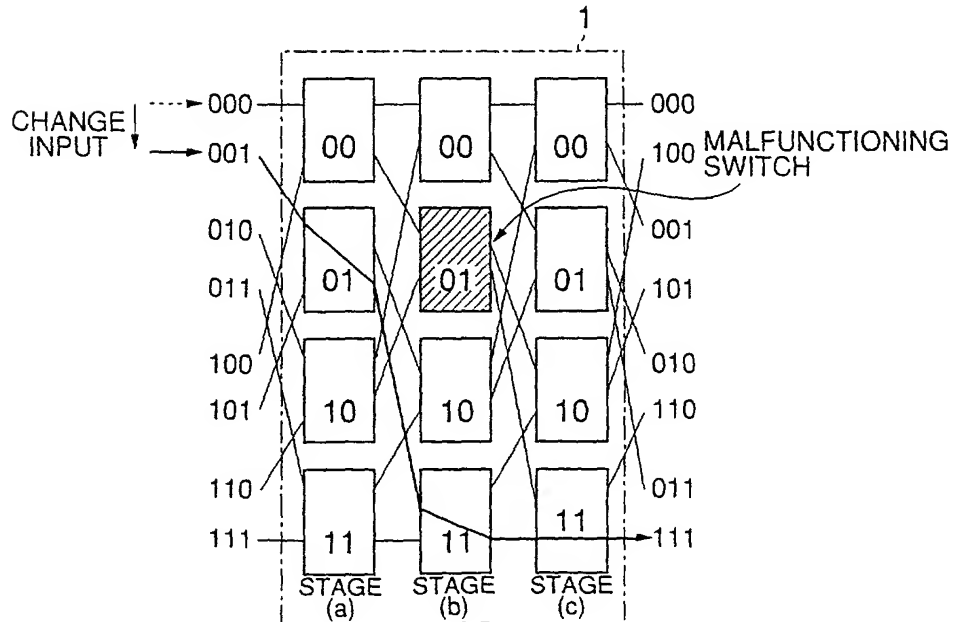
# FIG.17A

ROUTING FROM "000" TO "111" (BEFOR CHANGE)



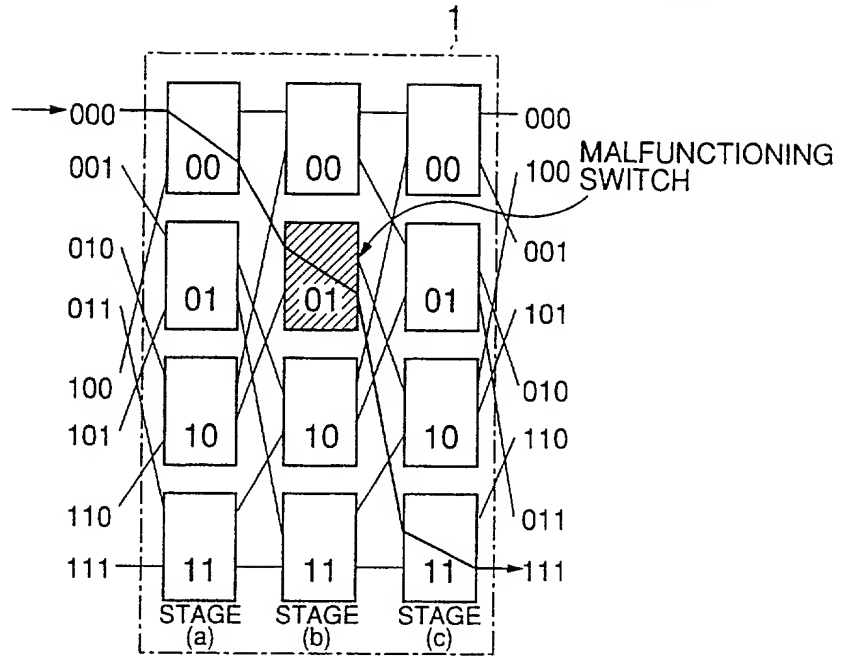
# FIG.17B

ROUTING FROM "000" TO "111" (AFTER CHANGE)



# FIG.18A

ROUTING FROM "000" TO "111" (BEFOR CHANGE)



# FIG.18B

ROUTING FROM "000" TO "111" (AFTER CHANGE)

